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ON THE ROLE OF INFORMAL FINANCE IN JAPAN ITS PROTOYPE: MUJIN (ROTATING FINANCE) AND ITS PUBLIC SUBSTITUTE: THE POSTAL SAVINGS SYSTEM

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SUMMARY

On the Role of Informal Finance in Japan: Its Prototype: Mujin (Rotating Finance) and Its Public Substitute: the Postal Savings System

Robert Dekle and Koichi Hamada

This paper studies the economic role of two contrasting financial intermediaries in Japan, Mujin (literally translated "inexhaustible," a form of rotating savings and credit associations (RoSCA)) and the Postal Saving System. Both of them are closely associated with the informal finance in Japan. Mujin is a typical form of informal finance, while the Postal Saving System is a formal financial intermediary that took over the role of the informal intermediary.

Mujin, or Tanomoshi-ko as it was called in the Western part of Japan, was a typical device of financial intermediation that started more than a thousand years ago and continued until very recently. The amount of fund was not so large relative to the magnitude of financial intermediation that took place in industrial Japan. Qualitatively, the presence of Mujin was important because it was a helpful means of finance among relatively low income people. Thus the Meiji modern government could not neglect Mujin, and tried to consolidate into banking institutions that handle the RoSCA activities. The weight of the RoSCA activities became gradually low. Recent creation of the Second Local Banks absorbed all the institutions of Mujin tradition. Thus the history is the emergence of these interesting RoSCAs, government intervention to control and consolidate RoSCAs into modern institutions.

In spite of the quantitatively small role of Mujin, we consider the description and analysis of Mujin is important because of its interesting financial mechanism and of its role in everyday finance in the historical and post-Restoration Japan. Also it is worth documenting because almost all literature on Japan's RoSCAs is written in Japanese, in contrast to the fact that the RoSCAs in many other countries including Korea and Taiwan are well documented in English.

A lesson to present day developing countries, is that the Mujins were insufficient to suit the needs of a modernizing economy. The Mujins depended on the monitoring device by kinship, religions, and local community ties. As the Mujins became larger, more members of the mujins were strangers, and moral hazard problems increased. Thus, over time the Japanese Ministry of Finance increased its regulation of the Mujins and the Japanese government introduced the Postal Saving System.

The policy implication of the history of Mujin would be the following. Mujin was used by lower and middle class in Japan, and occasionally criminal activities were involved. The Ministry of Finance could be justified in trying Mujin institutions under its control and modernizing them, in order that common people would not suffer from dubious practices in Mujin or their bankruptcies. From 1930 to 1990, there hardly were bankruptcies. Thus their purpose was well achieved. Or, we can say that it was too well achieved. For, the present financial turmoil in Japan has been caused because banks including banks originated from Mujin were excessively tamed by the banking regulation by the Ministry. They are accustomed to relying on the administrative guidance so much that they almost lost the sense of independent responsibility for their financial decisions.

For a developing country, controlling the financial market by a finance ministry by modifying and suppressing emerging informal finance may be useful for a while in order to embed modern financial markets and institutions. At the same time, the control and reorganization of financial institutions should carefully made in order not to suffocate the incentive mechanism of economic agents.

The Postal saving system in Japan has been a public scheme of absorbing small savings to modern sectors. Therefore it is not an informal financial intermediary. On the contrary, it is a "public" intermediary. Then why do we discuss the Postal saving system in an IRIS project that primarily deals with informal finance? We discuss it because the Postal saving system is a public fiance that is directly aimed to substitute informal finance. Informal finance usually serves to syphon small units of funds from many savers to finance projects in the neighborhood community. The Postal saving system collects deposits in small units but channels the fund to the more modern part of the economy.

Introduction of foreign technologies and institutions was a typical form of economic development in Japan. First of all, Japanese culture was the product of adaptation of chinese culture during a long period of time. As the Meiji Japan imported army from France, the central bank from Belgium, banks from the United States, it imported navy and the Postal saving system from Great Britain. In the incipient period of replacement of other financial instruments, the Postal saving system was not completely without difficulty. The Postal saving system could, however, take advantage of economies of scale due to the nation-wide Postal network, and economies of scope in that post offices engage both in postal services and savings business at the same time. Banks hired high-wage clerks in modern, stylistic buildings. Post offices were plain and officers were locals. Thus once the Postal saving system gained momentum, the system grew rapidly, even to become the largest financial institution of the world.

The fund collected to the system was used to implement the industrial policy by financial incentives as well as to finance social overhead capital and housing investment. Money was led by the system and related governmental agencies to the key or targeted industries. As long as one gives positive assessment to the industrial policy of Japan --- there are some economists who do not appreciate the industrial policy --- one would recognize the role of the financial policy that facilitated the promotion of chosen industries (J. Zysman).

There are some problems related to the Postal saving system. First, to be a gigantic would create the tendency to be a monopoly. Bureaucratic control may provide a hotbed for corruption. Moreover, the controlled interest rate on the Postal saving deposit often works against the deregulation of financial market in Japan. Banks, which are also protected by rigid interest rates, complain rightly or wrongly that the existence of the Postal saving system hinders market mechanism. The confrontation is called "Yucho senso (Postal saving war)." Thus the Postal saving system thus collects what an informal financial intermediaries would collects. However, instead of financing the funds around the community of savers, the Postal saving system channels the fund to modern sectors, or what government thought growing sectors, of the economy.

Despite these problems, we consider that the Postal saving system in Japan succeeded in mobilizing small local savings that would have gone to informal finance otherwise. It channeled savings to industrial sectors that were considered to be important for future growth. From these observations, one could recommend developing countries at least to look at the possibility of introducing a Postal saving system.

The lesson from the Postal Saving System in Japan to developing countries seems to be that some regulation of the financial sector and the introduction of public sector financial institutions could be Pareto improving. Presently, the policies recommended by many international organizations and that pursued by the developing economies themselves are almost exclusively towards the direction of financial liberalization. Japan represents the probably unique case of a developing economy (in the pre-war period) that increased government regulation as the economy developed. At the present time, the over regulation is a source of troubles. But during the period of industrial development, the government interventions and regulations might have played a productive role.

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Its Prototype: Mujin (Rotating Finance) and
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1. Introduction

Economic development raises income and wealth and promotes financial intermediation. On the other hand, financial intermediation facilitates economic development, since better financial intermediation raises the returns to investment.

In the process of economic development, many informal financial schemes are transformed into a more formal, well organized, national financial system. One of the central problems of economic development is how to tap the saving of the households in the informal and rural sectors to finance industrial development (Myint, 1964, p.128). Thus, there is continued, intense interest in the design of financial institutions that can attract the accumulated wealth of the small, rural saver.

In this paper we will study two rather contrasting financial intermediation schemes in modern Japan. The first is the rotating savings and credit association (RoSCA) called the Mujin (kō) or the Tanomoshi-ko. Both of them are closely associated with the informal finance in Japan. The first is a typical form of informal finance: the second is a public financial intermediary that replaced the informal finance.

Mujins have survived from the traditional, pre-modern era. That they have survived from the pre-modern period to at least 1945 suggests that these institutions may serve an economically useful purpose. Although small, Mujins have provided funds to small and medium sized firms in the local sectors of the Japanese economy. Soon after World War II, the Mujins reorganized as mutual (Sogo) banks and started accepting deposits.

Only a few years ago, the mutual banks were reorganized into the so-called "Second-Tier" regional banks. In the early 1990s, these banks suffered from problems of bad loans and from possible threats of insolvencies because of the burst of Japan's asset price bubble.

RoSCAs are found all over the world, and much has been written about them (Bouman, 1977; Geertz, 1962; Campbell and Ahn, 1962). The features of Japan's Mujins have much in common with those in other parts of the globe. There are several reasons why a study of the Japanese Mujins may be of interest. First, few accounts of Japan's RoSCAs exist in the English language. Second, the process of transforming the Mujin into a modern corporate form is interesting from both economic and political points of view. The Ministry of Finance, assisted by the Bank of Japan, took the initiative and successfully attained its bureaucratic objectives. Finally, the RoSCA represents one of the few traditional financial institutions to which the Arrow-Debreu analysis can be directly applied (Townsend, 1992), and an additional study in a different continent may be quite informative.

We contrast the history of the Mujin and the mutual banks to the development of the Japanese Postal saving system (Yubin Chokin). While the Mujins financed small investors, the Postal saving system was introduced to foster the transfer of small saving to the modern sectors of the Japanese economy. Like the many institutions, systems and practices that the Japanese government borrowed from abroad, Army from France, Medicine from Germany, National Banks from the United States, Central Banking from Belgium and so forth. The Postal Saving System was introduced from England. The Postal banks soon gained strong popularity, and often competed with the commercial banks for obtaining deposits. The Postal Saving System provided a vehicle to transfer a substantial amount of funds to the modern sector, in particular, to the sectors promoted by the government under industrial policy. In fact, in the post-war period, the investment allocation arm of the fund, called the Fiscal Investment Loan Program (FILP), was a useful means of industrial policy. The postwar automobile, steel, shipbuilding, and other heavy industries all received funding from the FILP (Calder, 1994; Vestal, 1993). FILP was mainly financed by Postal saving deposits.

The Postal saving system exemplifies the typical process of borrowing a system from another country. Mujins, on the other hand, depended on the community tradition. Foreign technologies and institutions were borrowed from advanced countries and then adapted to the Japanese environment, and the funds collected by the Mujins were simply inadequate to finance Japan's modern industrial development. The Postal saving system functioned as a device to collect small saving from many localities and then to channel the saving to the modern and government assisted sectors. The Postal saving system gradually assumed much more importance than the Mujins.

In this paper, we compare the Mujins with Japan's Postal saving system, tracing the historical development of these institutions and the role of the Japanese government in fostering these institutions.

2. Mujins

2.1 Pre-contemporary Roots of the Mujin

The Mujin is a Japanese form of a rotating saving and credit association. Members of the Mujin contribute funds and can win the pot by drawing or by bidding. The Mujin originated from Buddhist traditions, coming from India, China, and Korea and finally to Japan. In Japanese historical records, the word "Mujin" first appeared in 1255, but at that time referred to pawn financing. Later the word was used synonymously with Tanomoshi, which is Japanese for the rotating savings and credit association (RoSCA).[1]

In Buddhist teachings, the Mujin means inexhaustible, something like the widow's curse. Tanomoshi-ko is a trustworthy community. Even during Japan's pre-modern period, these rotating savings and credit associations were considered to be helpful, even ingenious, schemes of financing.[2]

Tanomoshi means helping the needy, particularly mutual help by the many for the needy. In principle, Tanomoshi provided financing without collateral and without interest payments. When commercial lenders did not provide sufficient lending to the poor, a group of people gathered, contributed a certain sum of money, and extended loans to the needy.

A 1275 document found at Kōya-san (Mt. Kōya) Temple has a reference to "Tanomoshi". The reference said that legislation forbade feudal administrators from confiscating money from the Tanomoshi formed by the common people. Thus, Tanomoshi must have been older than that year. The name Mujin developed in the Eastern (Kanto)

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[1]We owe the following descriptions to Zenkoku Sogo Ginko Kyokai (1971), Miyamoto and Takashima (1991) and Mori (1982).

[2]When one of authors was a child, his family lived with a farmer's family in the countryside in order to avoid bombing during World War II. He was always welcome to people's gatherings at the landlord's house. There was one time, however, when he was told by his father not to go and bother people because they were gathering for Mujin. That memory still lingers with him after more than half a century.

region, and the name Tanomoshi in the Western (Kansai). By the Muromachi period (1338 - 1467), the institution of the Mujin=Tanomoshi-ko had been shaped.

The first systematic document surveying the Mujin was by the Bank of Japan (1913).[3]

...Mujin-ko or Tanomoshi-ko was developed to help those who were hit by fire, disease, or other disasters. The contributions were gathered and the first pot was not distributed by lottery, but given to those in hardship. Since this spirit of charity stems from religious beliefs, this method of mutual help was originally practiced among those in a village that share the same religion. Later this method was used by temples that became the "Parents" of the ko which invited a wider range of participants. After the expansion of the scale of the ko, some members engaged in unfair practices. Gradually, the Mujin was transformed from a "one-shot," charitable organization to a permanent, commercial one.

In cities, funds from the Mujin were used as operating capital by lower-class tradesmen, many of whom used the Mujin in order to avoid money lenders.

The traditional system of the Mujin-Ko or Tanomoshi-Ko contract consisted of the following elements.

(1) Initiators or originators of ko were called "Parents."

(2) The initiator gathered a few to more than ten people who constituted the membership of the Ko.

(3) The members agreed on the terms of the operation.

(4) Members attended regularly the meeting of the Ko and had to make a contribution of a certain amount of money.

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[3]Translation by the authors.

(5) The money collected was paid out as a "pot" to a person determined by chance drawing or by bidding.

(6) The members who obtained a pot could not participate in any additional drawing or bidding. They were required to give contributions to the meeting each time. Some interest could be added. Also a collateral or a bonds-man (guarantor) was required in some cases.

(7) After everybody obtained a loan, the Ko would dissolve.

(8) The rate of interest was adjusted in such a way that the late receivers of funds paid less than their contributions.

The Tokugawa (Edo) period started in 1603 and more than two hundred fifty years of political stability followed. Temples and shrines organized the Mujin so that a person who had won the pot in an earlier round did not have to contribute afterwards. This arrangement made the ko more like a gamble than a mutual-help financial organization. A person who won early could take the funds and leave. Even the central (Shogunate) and local (Daimyo) governments were tempted to hold Mujin-type raffles for the sake of raising revenues.

Some writers emphasize the use of the ko for social welfare purposes. During the Kyo-ho (1716-36) reform, the poverty of farmers escalated. After the following famine and earthquake, Miura Baien opened the Charity-Mujin in 1756 which gave funds to members who had poor harvests. The timing of the distribution of the pot was set to meet the needs of the indigent.

Farmers started to use the Tanomoshi as a means for obtaining funds for buying land, horses and productive equipment. To buy capital equipment, a large amount of money (several thousand ryo) was needed. Those who seriously needed investment funds entered an auction for the pot. The implicit interest rate was often high, however, for the bidder who obtained the pot by the competitive auction.

From the original form of the Mujin for mutual assistance, commercial operations of the Mujin emerged. Historical records (in 1813) include a commercial Mujin established by a samurai (a warrior in service to a feudal lord) in order to remedy the budget of a local daimyo (lord) in Tsuyama, a province in the west of Kyoto. This Mujin was of the type that does not demand repayments from those who obtained the pot at earlier draws, and therefore was of a gambling type.

In 1868, the Meiji Restoration ended the Tokugawa period, and a central government based on the Emperor's ultimate authority was established. New systems such as banking and credit unions were introduced from foreign countries. As mentioned above, the Japanese depended much on borrowing technology and institutions from abroad. They then adapted the technology and the institutions from abroad for their own use. Japanese delegates went abroad in search for the best place to borrow technology and institutions. The primary and middle school systems were borrowed from France. The Meiji Constitution and the Civil Code were of German origin, but the Criminal Code was of French origin. The Imperial Army was influenced by the French army. The telegraph and railway were introduced from Great Britain and so on (Morishima, 1982).

The Restoration was characterized by relative political stability in spite of the great change in regime. Free trade was forcefully imposed by foreign countries, which facilitated Japan's rapid modernization. The land tax was introduced to secure the basic revenue for the government. Compared with recent experiences in developing countries, it is quite remarkable that the land tax was politically feasible at that time. The Japanese currency, the yen, was introduced in 1871. Banks, credit unions, and the Postal Saving System were all imported from the western countries. The Mujin or the Tanomoshi was the only financial institution that had survived from the old regime.

The Mujin remained virtually the only traditional financial institution. After the Restoration, there were many informal, but commercial, groups that exploited the Mujin method, not for the sake of religious activities or mutual help but for the sake of profit. City dwellers who found it difficult to borrow from commercial banks joined the Mujin system.

In the early Meiji years, there emerged Mujin enterprises that were permanent in the sense that they did not dissolve after one cycle of the Mujin and were commercial in the sense that they were completely driven by profit motives. In particular, around the turn of the century, numerous Mujin in the form of partnerships or joint-stock companies were established. For example, in 1901, Yamato Kai started with contributions by 150 members, 5 yen for every 20 days. This was called the Osaka type with less of an element of gambling. The Meiji government did not like the gambling aspect of the Mujin, as well as the other problematic parts of the Mujin that will be explained below. Starting from Hiroshima prefecture in 1898, many prefectures imposed regulations on the Mujin business.

Naturally, many possibilities of unfair and dubious practices existed in the Mujin. It is interesting to note that in a few government documents, the Mujin was characterized as the means of finance for "lower class" people. Also, the Mujins' fraudulent and sometimes violent operations attracted the attention of the mass media. Since the Mujin practice was related to gambling, violent gangs became involved. Even today, it is said that those gangs often help the enforcement problems related to lending by the "Second-Tier" regional banks, the descendent of the Mujin.

2.2 The Mujin Finance Law

The Ministry of Finance and The Bank of Japan made studies on the ongoing practices of the Mujin around 1915 and pointed out the advantages and the disadvantages of the Mujin. According to the Ministry of Finance, around that time there were 831 units that operated the Mujin, and their total capital amounted to 20.3 million yen. The Finance Ministry also published the following advantages and disadvantages of the Mujin.

Advantages of Mujin:

(1) Low income people do not like new methods of financing that have been imported from Western countries.

(2) Pawn borrowing and shark borrowing are not what low income people prefer. These methods often charge prohibitive rates of interest.

(3) People do not have, however, psychological resistance to the Mujin, the traditional means of finance.

Disadvantages of Mujin:

(1) It is difficult to force those who obtain the pot at an early draw to make further contributions.

(2) There are occasions of unfair drawing.

(3) There are often unfair differences in the implicit interest rates.

(4) A very high rate of interest may emerge by bidding, which may make the Mujin usurious.

(5) The timing of lending is inflexible.

(6) The accounting procedure is nontransparent.

For these reasons, the Japanese government has tried to strengthen the disadvantageous parts and keep the advantageous aspects by making the Mujin a more modern institution. The Ministry of Finance drafted a regulatory act that prohibited dubious practices and modernized the accounting systems of the Mujin. Many Mujin companies strongly opposed the enactment of the Mujin-Gyo-Ho (Mujin Finance Law).

In 1915, the Mujin Finance Law passed the Diet and soon became effective. The definition of the Mujin was clarified. The amount of the pot, the amount of the premium (contribution), the duration of the operation, and the number of members came under strict limits. For example, according to the attachment to the Law, a Mujin should not last more than 5 years, one unit of pot should be under 10,000 yen, and a company should not operate more than 100 groups. The most effective regulation in the Law was that the Mujin enterprise should be organized as a company, and 15,000 yen should be paid in as the capital installment. The law made withdrawing from the Mujin more systematic. Traditionally, early withdrawal caused problems for the Mujin, since a fall in membership meant that suppliers of funds became more scarce. According to the new law, one could only withdraw if appropriate successors were found.

In the traditional Mujin, there were two ways of calculating contributions and payments from the pot. The Tokyo style was the method that kept the contributions unchanged before and after the period when the participant received the payment. The Osaka style was the method that increased the amount of contributions after the period when the participant received the payment. Since an earlier pot payment meant an economic advantage for the member, the Tokyo style involved the element of luck or gambling. The Osaka method was closer in spirit to the traditional role of financial intermediaries, transferring funds between the surplus and the deficit units.

Traditionally, Tokyo (Edo) in the east of Japan was characterized by a free-wheeling, spontaneous spirit, as exemplified by the saying, "a Tokyoite never leaves money overnight." On the other hand, Osaka was a town of merchants and started probably, for the first time in world history, a rice futures market in 1730. The contrast between risk-loving Tokyoites and entrepreneurial, calculating Osaka dwellers is evident from the different styles of the Mujins that they have adopted.

The Tokyo and Osaka styles persisted even after of passing of the Mujin-law. The Tokyo style is the contract that pays the recipient of the last pot less than the accumulated amount of his contributions. The Osaka style is the contract that pays the last pot receiver more than the accumulated amount of his contributions. The contract was called eclectic when the receipt is equal to the accumulated amount. Gradually the Osaka style became more dominant. In 1939, all except three prefectures adopted the Osaka-style.

In 1935, the MOF found that there were more than three thousand different schedules relating to the timing of the draw, and payments. The MOF attempted to unify these schedules at the prefecture level, but in 1939 there were still more than one thousand schedules.

The rate of return to participants in the Mujin is fairly complicated because such variables as the timing of the pot (kitty) payment, the auction price, contributions before the payment, and contributions after the payment all affect the returns.

For the purposes of standardizing the schedules, the MOF provided formulas for calculating the internal rates of interest. Let us introduce the following notation:

Payment of the pot: A

premium (contribution) before the payment: B

additional premium (over B) after the payment: B'

the total number of periods: N

the timing of the payment: n

the interest rate on deposits: i

the implicit rate of borrowing for this person or the implicit rate: r.

Then the implicit, effective rate of borrowing was calculated by equating the present value of the benefit from the payment and that of the premia calculated at the end of the Mujin contract (Zenkoku Sogo Ginko Kyokai, 1970.) (Campbell and Ahn calculate similar implicit rates of interest for Kye and Mujins in Korea.)

$$A(1+r)^{m-n} = B\sum_{t=1}^{m}(1+i)^{t} + B'\sum_{t=n}^{m}(1+i)^{t}.$$

If one neglects the second order terms, one will obtain

$$A\{1+(m-n)\}r = B\{m+\frac{m(m+1)}{2}i\} + B'\{(m-n) + \frac{(m-n)(m-n+1)}{2}i\}$$

$$A(m-n)r = Bm+B'(m-n) - A + i\{B\frac{m(m+1)}{2} + B'\frac{(m-n)(m-n+1)}{2}\}.$$

and

$$r = \frac{Bm+B'(m-n)-A+i\{B\frac{m(m+1)}{2} + B'\frac{(m-n)(m-n+1)}{2}\}}{A(m-n)}$$

where Bm+B'(m-n) is the total premium, the term in the { } bracket is the accumulated months of paying premium, and A(m-n) is the accumulated month after the pot payment, that is the length of borrowing. Therefore, the effective rate of borrowing or receiving A is given by

$$r = \frac{\text{Total Premium Payments} - \text{Amount of the Pot} + (\text{Accumulated Months of Premium Payments} \times \text{Deposit Interest Rates})}{\text{The Length of Borrowing}}$$

In order to determine whether participating in the Mujin is more profitable than making a bank deposit, the r above should be compared to the bank deposit interest rate. The problem for a Mujin participant is of course that he does not know m, or the time when he obtains the pot. r is therefore uncertain ex ante.

The influence of the MOF was not limited to the unification of contribution-payment schedules and interest rates. The Ministry of Finance also played an important role in consolidating the numerous Mujins.

After the passing of the Mujin Finance Law, the number of Mujins fell from 2363 to only 136. In 1915, the Mujin came under the control of the Ministry of Finance. In 1931, the Mujin-Finance Law was amended, and the Mujin was permitted to exist only as joint stock companies.

The scale of Mujin financed financial intermediation is given in Table 2. The absolute amount of financing was relatively low, but it is remarkable that this traditional form of financing coexisted with the modern financial sector.

After the financial crisis of 1927, and consequent financial bank-runs, the Ministry of Finance tightened its control and tried to limit the number of banks and Mujin companies. During the Second World War, the Ministry of Finance attempted to reduce the number of Mujin to one in each prefecture, to 47. Sometimes Mujin companies were hesitant to be merged, but the MOF argued that mergers were necessary to increase the efficiency of the banking system, and that banking efficiency was necessary to win the war against the United States.

During the war period, an important concern of the government was to increase saving rates. Thus, although deposits were not allowed de jure for Mujin companies, by various devices it was made possible for the Mujin to de facto accept saving deposits.

2.3 Post-war Development of the Mujin.

After the war, Japan's economy and financial markets were in turmoil. There emerged many small finance companies (called shokusan kaisha, meaning "industry promoting companies") that provided funds to small and medium-sized companies. After paying-in deposits of at least 50 yen for 60 times, a client could obtain 10,000 yen in credit. These finance companies differed from the Mujin in that a group did not need to be organized, and borrowing was possible without lotteries or auctions. The financing conducted by these schemes was called Minashi (bogus) Mujin. These "bogus" Mujin soon became very popular, and the government amended the Mujin-Finance law to include these new finance companies. The passing of this amendment started the transformation of the Mujins from their original form as a rotating credit association to more general financial intermediaries.

Officials at the General Head Quarters (GHQ: the popular name of the Supreme Commander of Allied Forces that was occupying Japan after World War II) were not sympathetic to Mujin operations, and prevented Mujins from accepting demand deposits. GHQ officials did not understand Mujins well, and regarded them not as a means of finance, but as a means of gambling. GHQ officials wanted to limit deposit activities to only commercial banks, which was the situation in the United States (Zenkoku Sogo Ginko Kyokai, pp.147-8).

In practice, however, the post-war Mujins played an important role in providing finance for small and medium-sized enterprises. However, as the Japanese economy developed, some of the provisions of the post-war Mujin Law became too restrictive. For example, lending was usually limited to within a prefecture, and there were strict limits placed on where excess funds could be invested.

The National Mujin Association therefore asked the government to draft a new law that would make the Mujin companies more like small-scaled banks. Small and medium-sized enterprises were also dissatisfied with the loan behavior of the large banks, and needed banks that dealt more exclusively with small and medium-sized firms. To appease the GHQ, the name Sogo Ginko or "mutual banks" was chosen to refer to the transformed Mujins. The Sogo Ginko Ho, or Mutual Bank Act passed the Diet on May 1951.

The purpose of the law was to "provide smooth financing to the (common) people and to promote the savings of the (common) people (Article 1)." The activities of the Mutual Banks included among others (i) accepting premiums or contributions with the contract to do a payments during or at the end of the contract --- Mujin business --- (ii) accepting deposits or term deposits, and (iii) extending loans and discounting bills. Items (ii) and (iii) were activities that had only been partially allowed previously. There were still, however, size and geographic restrictions on the loans.

It is usually believed that the Japanese government is so strong that it can realize whatever it intends to accomplish. During the war, most of the attempts by the MOF to consolidate the Mujins were realized. After the war, however, there were some cases where merger attempts were unsuccessful.

For example, in Fukuoka Prefecture in Kyushu, in 1971, the President of Fukuoka Sogo Ginko and the President of Shokin Sogo Ginko informally agreed to an even handed merger, and the Fukuoka business community welcomed this move. The President of the Shokin Sogo Bank secretly planned the merger because there were some outstanding loans that were fraudulent. However, the management, a group of branch chief managers, and the labor union did not approve of the merger. They opposed the President claiming that the Bank would soon recover from the scandal, and that the counterpart bank, the Fukuoka

Sogo, had a substantially different corporate culture. The merger fell through. This lack of success is attributed to the lack of "nemawashi" (laying the groundwork) on the part of the top management of the Shokin Sogo Bank.

In 1978, the executive directors of Kansai Sogin in Osaka voted to merge with the gigantic Sumitomo (Commercial) Bank, which already had sent six executives (among the total eleven) to Kansai Sogin. The MOF encouraged the move as a way of achieving efficiency in the banking sector. However, labor unions, branch chief managers, and, moreover, clients of Kansai Sogin strongly opposed the merger. A description of their grounds for opposition is worth recording.

"--- I doubt if banks should follow solely the objective of efficiency. The effect on clients should be taken into account as well. --- There is a difference of philosophy between Sumitomo and us. Sumitomo is an institution in which a handful elites take leadership and everybody else pursues the same target in perfect order. They live an admirable life, ---, but as a human, a uniform, stereotyped life. --- We are different. We have been helping management of small and medium enterprises. Our job is hard, not so fashionable, but we are proud of it." (Goto 1994, p.453)."

Because of this strong opposition, the Chairman of the National Association of Mutual Banks opposed the merger and asked the MOF to settle the situation. It was the first time that the Association expressed an opinion on the management policies of an individual participating bank. The MOF took the side of the opposition, and the merger failed.

Since the 1980s, mutual bank mergers were the general trend. Moreover, the transformation of the mutual banks into commercial banks was made an important agenda of the government. After thirty years of the mutual banking system, the mutual banks in the 1980s performed about the same general activities as the general commercial banks. In 1985, the Kinyu Seido Chosakai (Advisory Study Council of the Financial System) changed its attitude from keeping the status quo in the banking sector to advocating the transformation of the mutual banks into commercial banks. Thus, between 1989 and 1990, all of the mutual banks were transformed into commercial banks. The history of the Mujin, Tanomoshi-ko, Mujin Companies, and the mutual banks was finally closed.

2.4 The Theory of Rotating-Credit Associations.

An interesting theoretical question is why the Mujins were sustainable as a method of finance. What types of economic incentive mechanisms were working in the Mujins, or more generally, in rotating Savings and Credit Associations (RoSCA)? A rigorous study of economic incentives is given in Besley, Coates and Loury (1993) and Banerjee, Besley and Guinnane (1994).

The Mujin is a useful device to cope with indivisibility in consumption, investment and the provision of public goods by means of cooperation. (Incidentally, the Mujin was historically used for much more diverse objectives than for obtaining consumer durables as it is assumed in the above theoretical models). It was also an effective system for mutual social security in a community. It encouraged saving, in particular, if economic agents are risk-loving in at least a certain local range of income levels.

The Mujin emphasized community ties. Members would monitor each other so that the borrower would have to repay the debt in the form of a contribution after he obtained the pot.

In spite of these advantages, the Mujin had many problems as well (Mori, 1982). The basic problem was that except for the first winner of the pot, who often happened to be the initiator, the demand and the supply of funds do not coincide. From the second drawing, the fulfillment of the demand either depended too much on dice, or was often realized by the bid of those who reduced the pot and accordingly would pay a very high rate of interest.

As the modernization of the national economy and trade among local regions proceeded, this local financing scheme could not grow because the above difficulties were not resolved. To achieve a large transfer of funds to the modern sectors, the Mujin could not function as an effective method of intermediation.

In their mathematical formulation of RoSCAs, Besley, Coate and Loury (1993) show that the RoSCA is a desirable device for a group that is socially connected, and that the RoSCA improves upon autarky savings of those who do not have access to any other capital market. They also suggest that some limit on the number of members may be socially desirable. Whether or not the regulations undertaken by the Ministry of Finance correspond to these theoretical implications demands further study.

The next question is how the interaction of economics and politics helped or hindered the transformation of this informal institution to a modern, formal organization.

First of all, in any reform, there are those who lose by the reform. As Olson (1965) maintains, the opposition from a small group can often be more effective than from a large group. Indeed Mujin businesses had substantial political power. Without some economic rationale for their existence, however, the Mujins could not have survived for a long time. This seems to indicate that even in a modern industrial state with a fairly developed financial market, some must have existed for the survival of a financial scheme that has had a history of several hundred years. Mujin played better the informational function that was needed for financial intermediation by making use of monitoring and sanctioning by peer pressure of communities.

2.5 The Korean Counterpart.

An interesting international aspect of Japan's Mujin is its propagation in Korea. Korea has its own RoSCA called Kye. Campbell and Ahn (1962) documents the coexistence of Kye and the Mujin in Korea. Kyes gained popularity after the Korean War. According to them "in June 1959, --- out of 2,691 households sampled, 1,603 were liable for debts. Approximately eight percent of the borrowers obtained their loans from banks. Less than two percent borrowed funds through the Mujins. The bulk of the borrowers obtained their loans from 'individuals and acquaintances'." Campbell and Ahn interpret the last category as consisting of loans through Kyes.

Mujins were established in Korea during the occupation period by Japan with the same regulations as in Japan, the Mujin-gyo Ho in 1931. In the 1950s the interest rates paid by the Mujins were lower than that paid by the Kye. According to Campbell and Ahn, Kyes and Mujins are flexible ways of coping with inflation. They argue that these devices appear "to be examples of a particular ingenious institution enabling borrowers and lenders to adjust the terms of loan contracts so as to facilitate the lending of money under inflationary conditions."

2.6 The Economic Role of Mujin

Most of the features of the RoSCAs that are found abroad can be found in the Japanese versions. By tracing the history of the Mujin (Tanomoshi) for more than 700 years, we have observed many facets of the evolution of financial intermediation at the informal level, the function of contingent contract in financial transactions under incomplete information, and the role of the government in the formation of the modern financial system. The Japanese government has attempted to consolidate, and rationalize, and economize these activities. After the Mujin-gyo Ho, and the Mutual Bank Act, Mujin companies and mutual banks were forcefully merged and integrated.

The political process involved in organizing these small, informal financial institutions into a more modern institution is interesting. The RoSCAs in the United States were also organized by ethnic groups, and were reorganized during the turn of the century as the predecessors of the Savings Loan Associations, which were coincidentally, a source of financial instability in the U.S. in the mid-1980s.

Mujin is a form of traditional finance that combines skillfully the capacity to monitor the availability of funds. To cope with indivisibilities of investment and to cope with monitoring problems, this system has developed and survived as a surprisingly popular financing system among less wealthy (or "lower" class of) people in spite of the simultaneous development of modern financial institutions.

At first, elements of religion and charity were strong. The information problems of monitoring borrowers was alleviated by mutual surveillance within the group; as common members of the same Buddhist sect, members could usually trust each other. However, the traditional Mujin was limited because the group had to be homogeneous. As the Mujin expanded to include a larger number of people, the profit motive and the possibility of fraud entered.

The government could not suppress the Mujin because the institution helped people who were unable to obtain loans from commercial banks. The Mujin helped those who wanted to avoid the high interest rates charged by pawn brokers and loan sharks.

The tension between better monitoring through close observation and collecting more funds through gathering more participants always remained. The government tried to modernize and regulate the Mujin by the Mujin Finance Law. The government aimed to maintain the attractive features of the Mujin for local and low-income people, but at the same time tried to make the Mujin a part of Japan's regulated financial system.

To conclude, Mujin or Tanomoshi-ko, as it was called in the Western part of Japan, was a typical device of financial intermediation that started more than a thousand years ago and continued until very recently. The amount of fund was not so large relative to the magnitude of financial intermediation that took place in industrial Japan. Qualitatively, the presence of Mujin was important because it was a helpful means of finance among relatively low income people. Thus the Meiji modern government could not neglect Mujin, and tried to consolidate into banking institutions that handle the RoSCA activities. The weight of the RoSCA activities became gradually low. Recent creation of the Second Local Banks absorbed all the institutions of Mujin tradition. Thus the history is the emergence of these interesting RoSCAs, government intervention to control and consolidate RoSCAs into modern institutions.

In spite of the quantitatively small role of Mujin, we consider the description and analysis of Mujin is important because of its interesting financial mechanism and of its role in everyday finance in the historical and post-Restoration Japan. Also it is worth documenting because almost all literature on Japan's RoSCAs is written in Japanese, in contrast to the fact that the RoSCAs in many other countries including Korea and Taiwan are well documented in English. Japan's case has a strong contrast with that of Taiwan (Besley and Levenson, 1994) where a substantial portion of people engaged in some kind of rotation finance. Why the role of Mujin is so small remains to be studied.

The policy implication of the history of Mujin would be the following. Mujin was used by lower and middle class in Japan, and occasionally criminal activities were involved. The Ministry of Finance could be justified in trying Mujin institutions under its control and modernizing them, in order that common people would not suffer from dubious practices in Mujin or their bankruptcies. From 1930 to 1990, there hardly were bankruptcies. Thus their purpose was well achieved. Or, we can say that it was too well achieved. For, the present financial turmoil in Japan has been caused because banks including banks originated from Mujin were excessively tamed by the banking regulation by the Ministry. They are accustomed to relying on the administrative guidance so much that they almost lost the sense of independent responsibility for their financial decisions.

A lesson for present day developing countries is that the Mujins were insufficient to suit the needs of a modernizing economy. The Mujins depended on the monitoring device by kinship, religions, local community ties. As the Mujins became larger, more members of the Mujins were strangers, and moral hazard problems increased. Thus, over time the Japanese Ministry of Finance increased its regulation of the Mujins and the Japanese government introduced the Postal Saving System. For a developing country, controlling the financial market by a finance ministry by modifying and suppressing emerging informal finance may be useful for a while in order to embed modern financial markets and institutions. At the same time, the control and reorganization of financial institutions should carefully made in order not to suffocate the incentive mechanism of economic agents.

We have seen that as the financial needs of the modern, high-technological sector increased, the government could no longer rely exclusively on informal financial institutions to collect small deposits. The government created the Post-office saving system, which helped finance Japan's industrial expansion.

3. The Post-Office Saving System.

3.1 Introduction.

In the previous Section, we showed the important role Mujins have traditionally played in attracting deposits from small scale savers and in financing small scale enterprises. Table 2, however, shows that Mujin deposits were never substantial, even in the pre-war period. This Section describes a Japanese savings institution that has attracted a much larger share of deposits, the Postal Saving System.

We will argue that the Japanese government introduced the Postal Saving System to solve difficult market failure problems in the Japanese pre-war private banking system. We will trace the history of the Japanese Postal Saving System from its inception to the present, and suggest that today, instead of supplementing the private banking system, the Postal Saving System may actually be supplanting the deposit collection activities of the private banks.

Funds collected from Postal saving were transferred to the coffers of the Japanese Ministry of Finance, and in the post-war period, the funds were used as credit directed to sectors deemed strategic by the Japanese government. In the immediate post-war period, the priority sectors were in heavy-industrial manufacturing, but recently, most of the funds collected from the Postal Saving System have been channeled to welfare enhancing programs such as housing loans, rather than to sectors that may increase Japanese future productivity.

Finally, we will compare the Japanese Postal Saving System with those of Great Britain and the United States, and will point out that unlike in Japan, in the U.K. and in the U.S., Postal saving was not used for directed lending.

3.2 Problems with Japanese Private Banks in the Pre-war Period

The early Japanese Banking Laws such as that of 1890 promoted open competition. As the Meiji period progressed (1868-1914), entrepreneurs founded many banks and quasi-banks. After the 1890 Act, the number of private, commercial banks jumped from 678 in 1893 to 1802 in 1900.

For our purposes, there were two types of private, commercial banks, the large Zaibatsu (Conglomerate) affiliated banks and the smaller private banks. The Zaibatsu banks such as Mitsui and Yasuda (post-war Fuji), because of transactions costs, would only accept deposits from large firms, and rich entrepreneurs, merchants, and landowners (Asakura, 1988). Mitsui and others wanted to become investment banks, making money by investing their own capital.

The smaller private banks mostly operated in rural areas and port cities and engaged in commerce and production, in addition to finance. Much of the lending was very speculative--in stocks and in land. Some industrialists founded private banks to finance start-ups and affiliated trading companies. An example is the bank started by local sake brewers, the Nada Shogyo Ginko in Hyogo prefecture (Patrick, 1966).

The management of these small banks was often unscrupulous. Teranishi (1982) gives an example of a small private bank that collected deposits in Chiba prefecture in the morning, closed shop, and moved to Kanagawa prefecture in the afternoon to collect more deposits. When bank examiners descended on the bank the next morning, the bank had already moved to Saitama prefecture. The bank had no records of the collected deposits, and the officers and managers of the bank had not shown up for work for several months.[4]

[4]There was obviously insufficient private monitoring of the managers of these banks. Stiglitz (1993) argues that monitoring is a public good. If one depositor takes action to reduce the likelihood of unscrupulous management, other depositors will benefit. As in the supply of any public good, there is an undersupply, and too little effort is expended on monitoring the financial institutions.

In addition to unscrupulous management, a problem common to the small private banks was that they were too dependent on one borrower or industry. When the borrowing firm failed, the bank often failed as well. The failed Fifteenth bank, for example, mainly loaned to Kawasaki Shipping (a shipping company). During the world-wide slump in shipping in the mid-1920s, Kawasaki Shipping could not meet its loan obligations, worsening the balance sheet of the Fifteenth bank.

3.3 Review of the Relevant Theory.

These examples suggest that there were apparently severe informational problems inherent in the Japanese pre-war private banking system. Given the unobservability of the portfolio holdings of the banks, the average depositor probably could not discriminate between a "good" small bank and a "bad" one. Theories of adverse selection and moral hazard would suggest that the small commercial banks which catered to the average saver were likely to be constrained in the quantity of deposits that they collected (Stiglitz and Weiss, 1981). Believing that the banks which catered to him were on average unsound, the lender, the small saver, may have rationed his lending.[5]

Rotating credit associations (the Mujin) and other informal financial institutions may reduce the moral hazard through "peer pressure" (Stiglitz, 1990). The contract, however, that ensures repayment by the borrower may require that the saving be invested locally. For

[5]Banks or private insurers may be able to issue insurance to protect the deposits. However, prospective depositors have no more reason to trust the insurance contract than the original saving deposits. In fact, a large-scale bank run will probably mean that the insurer, insuring many banks, will go bankrupt (Stiglitz, 1990).

example, in Banerjee, Besley, and Guinnane's (1992) model of a German credit cooperative, a non-borrowing member is assumed to observe the quality of the project undertaken by the borrower. Clearly it would be more difficult to observe projects that were not local or were unfamiliar to the association members.

In a developing country like pre-war Japan, many of the projects in the modern sector involved advanced technology that was unfamiliar to most participants in the informal financial markets. Familiar projects in the informal, traditional sector, however, may not be where the social returns to investment are the highest.

For example, DeLong and Summers (1991) showed that the social returns to equipment investment are higher than the social returns to investment in other physical assets, although the private returns are the same. Given the gap between the social and the private returns, private markets may be unable to allocate assets optimally.

Stiglitz (1993) offers another reason why private markets may be unable to allocate capital optimally, and argues for the effectiveness of government directed credit under some circumstances. Given that private banks must scrutinize loan applications carefully, it may be difficult for banks to screen for a broader set of criteria, and in any case, private banks will not care greatly whether the difference between the social and the private returns are large. Sectors in which the gap between the social and private returns are large may be targeted with directed credit. These sectors may include technology intensive sectors, and export-oriented industries.

Because of these reasons, the government may be able to improve upon the private allocation by transferring funds that otherwise would have been invested in the rural sector to the modern, capital intensive sector. The pre-war Japanese government's intervention in the financial system may have helped solve the twin problems of 1) alleviating the information problems inherent in introducing private modern banking in the informal sector, and 2) needing to finance the modern sector.

One often mentioned criticism of government financial sector intervention is the repression of nominal interest rates, leading to depressed private saving (McKinnon, 1973). The Japanese government has pursued a low deposit interest rate policy since the 1930s, but private saving in the financial system appeared to be unaffected.

The relationship between the real interest rate and the financial saving rate has been historically weak in Japan. Table 1 depicts the gross national saving rates for Japan in the pre-war and the immediate post-war periods. Japan's gross national saving rates in the pre-war era were not high. Pre-war rates reached their peak of 25 percent immediately before and during the Second World War.

Figure 1 depicts real interest rates on time and ordinary commercial bank deposits in the pre-war and post-war periods. The pre-war interest rates are what the larger banks in Tokyo paid out. In the pre-war period, smaller banks and banks located in the regions often paid interest that was up to three times higher than what the large banks in Tokyo offered (Teranishi, 1982).[6]

The Figure shows that during the high saving, rapid growth period in the 1960s, real interest rates were lower than in the low saving years of the 1920s. When household saving

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[6]Inflation rates were extremely high during World War II and the post-war Reconstruction period, resulting in real interest rates as low as negative 55 percent. We omit the World War II and the Reconstruction periods from the Figure.

rates rose in the 1970s, real interest rates were negative. It appears that in Japan, the correlation between real interest rates and the saving rate is weak. Japanese government control of the nominal deposit rate appeared not to depress the private saving rate.

Given the somewhat conflicting needs of collecting the savings of the small depositor and financing large-scale industrial development, the Japanese government, while promoting competition in the private banking system, gradually became more involved in the financial system. An important example of Japanese government involvement was the founding of the Postal Saving System in 1875.

3.4 The Pre-war Development of the Japanese Postal Saving System

Japan was the fourth nation in the world to introduce Postal saving after Britain, New Zealand, and Belgium. The system started in August 1975 when Hisoka Maejima, the Postal Minister started accepting Postal deposits at several major branches of the Postal service. At first there were only 18 branches in Tokyo and 1 in Yokohama that accepted Postal deposits. The number of offices grew to 89 in 1876 and 161 in 1877, and the branches were mainly in the major cities of Tokyo, Kyoto, Kobe, and Osaka areas. It is remarkable that the Japanese Postal Saving System was started a scant 6 years after the Japanese Postal Ministry itself was established in 1869.

At first, deposit growth was slow, and initially, most of the depositors were Post-office officials and mail collectors. To popularize the system, the government Postal Bureau accelerated its public relations campaign, and sent out pamphlets to government offices and commercial establishments, emphasizing the security of the system and the potential of Postal saving to contribute to economic growth (Westney, 1987). From 1875, the government paid pensions through the system, and pensioners were strongly encouraged to save a portion of their pensions in the Postal saving accounts.

In 1876, the system started to spread nationwide, although it was well into the 1880s before the system reached most rural villages. In the late 1880s, the Japanese population was still 80 percent rural, but anywhere horse-drawn carriages or land runners could go, Postal saving was accepted. The nominal interest rate paid was raised to 5 percent by the late 1870s and the minimum deposit amount was reduced from 10 sen (1/10 of a yen) to 3 sen.

As it spread throughout Japan, the system increasingly attracted the small saver. Between 1884 and 1915, the average size of an account decreased from 22 yen and reached a minimum of 8 yen. The number of accounts exploded throughout the Meiji period, from 0.15 per 1000 citizens in 1876 to 250 per 1000 by 1915. Although there are several competing hypothesis for these phenomena, one reason is that greater numbers of small, rural savers were attracted to the system. As the number of Post-office branches increased, rural residents started to make Postal saving deposits.

These residents were not attracted by high interest rates. Nominal interest rates on Postal saving always remained about 5 percentage points below the rates paid by the most reputable banks, and 10 percentage points below the rates paid by the banks which normally catered to the small saver (Teranishi, 1982, p. 99). Rather, it appears that it is the safety of the Postal Saving System that appealed to the small saver.

There was also an upper limit to the size of a deposit an individual could hold. The upper limit was probably unnecessary, since medium and large depositors probably would not have used the Postal Saving System anyway. Not only was the rate of interest paid on deposits lower than that paid by the more reputable banks, but also Postal deposits were inconvenient. Often, a depositor had to wait weeks before he could withdraw his deposits. In the pre-war period, medium and large depositors were only attracted to the Postal Saving System during times of financial panic, when the private banking system appeared to be at risk, or when forced by the government as during World War II.

Table 2 depicts the proportion of total deposits held in various financial institutions. We can see that in the 1925-34 period, the proportion of funds in the Postal Saving System greatly increased. This is because in 1927, there was a major financial panic, sparked by the failure of two private banks, the Watanabe bank and the Taiwan bank. The failures resulted in large scale bank runs, because events in the mid-1920s made the banking system very shaky.[7] The rumor that Taiwan bank may go bankrupt created a panic, and on April 23 and 24, 1927, all banks were closed. As banks re-opened, small depositors fled the small and medium-sized banks to the Post-office.

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[7]On September 1, 1923, the Great Earthquake hit the Kanto (Tokyo) area. The structures of about 80 percent of the banks in Tokyo and almost all of the banks in Yokohama were destroyed (Yabushita and Inoue, 1993). The total physical damage caused by the earthquake was about 42 percent of Japan's GNP in 1923. The government realized that many debts incurred before the earthquake would have difficulty being repaid, so it issued a moratorium that allowed the postponement for thirty days of payments of debt, except wages, salaries, and bank deposits of a certain amount (Hamada, 1993). The Bank of Japan converted many of the debts of the afflicted private firms to so-called "earthquake bills," which it agreed to rediscount. Between 1923 and 1927, the banking system was forced to accumulate a large amount of earthquake bills.

By the Spring of 1927, it became clear to the banking community that many of the bills would never be repaid.

During the Second World War, the Japanese government pursued a strategy to make Japanese production more capital intensive. Interest rates were lowered through financial repression and Japanese citizens were exhorted to save, especially in the Postal Saving System, as exemplified by the slogan, "...saving during the war is a duty. Individual profits should be neglected." Within the Ministry of Finance, an institute to increase savings was founded, and subsidies were given to Post-office branches to help collect savings. There were also some institutional innovations during this period. In 1942, the Post-office started offering long-term saving deposits with an interest rate somewhat higher than that offered by the private banks, and for regular deposits, withdrawal was made easier.

3.5 Post-war Development of the Japanese Postal Saving System

The Japanese lost nearly 1/3 of their capital stock, and much of their territory during the Second World War. The lost supply capacity and the pent-up demand meant that there was great inflation after 1945. Both the Japanese government and the American Occupation authorities saw increased Japanese saving as important in alleviating the supply bottlenecks and reducing inflation.

In an attempt to increase saving, several institutional innovations were introduced into the Japanese Postal saving system. Previously, to earn higher interest, depositors had to leave their funds in time-deposits for at least a year, but in 1948, the minimum time requirement was lowered to six months, increasing the liquidity of time-deposits that earned higher interest. The Postal-saving system also started to emphasize advertising and salesmanship. A new mascot was adopted that in Japan symbolized savings, a squirrel.

Post-office workers received training in selling various deposit instruments.

Total Post-office deposits grew from 519 billion yen in 1947 to 3046 billion yen in 1953, but this growth was due more to a general rise in household incomes caused by the post-war economic boom rather than to an increase in the attractiveness of Postal-saving, since during the same period, the share of Postal Saving deposits in total deposits declined from 22 percent to 12 percent in the same period (Yoshino, 1992).

In general, in the post-war period, a pattern prevailed in which the fraction of total household assets held as Postal-saving declined during economic booms and increased during times of economic distress. Between 1960 and 1965, a time of rapid economic growth and rising share prices, the fraction of Post-office deposits fell, as households shifted their assets into investment trusts (stock mutual funds). Between the oil crisis of 1973 and the economic boom starting in 1986, a rather stagnant period, there was again an increase in the share of Post-office deposits. Between 1987 and 1991, Post-office deposits again fell out of favor, as funds flowed into the soaring stock market and the new money market instruments introduced by the financial deregulation of the mid-1980s.

In the post-war period, there has also been in shift in the types of depositors. During the pre-war, the vast majority of Post-office saving depositors were rural residents. However, in the post-war, there was a large increase in the proportion of depositors who were city-dwellers, especially those who lived in the six largest cities. This partly reflects the fact that Japan has become much more urbanized in the post-war period, but it also partly reflects the increasing availability of alternative savings institutions for Japanese rural residents. What has not changed is that the Post-office has continued to attract mostly the small asset holder. Medium- and large asset holders have tended to use the private banking system.

Today, it is said that the Japanese Post-office saving system is supplanting the Japanese private banking system, rather than supplementing it. The following quote from a Japanese postal worker is suggestive:

> ...I bump into salesmen from various banks almost every day at prospective customer's homes...to put it bluntly, we're all just fighting for market share. When we enter a particular region, we mobilize all our sales staff to conduct a thorough investigation of then neighborhood, and then canvas it door-to-door. If someone has recently moved into an area, the mailman tips us off right away. This gives us another edge over the banks (Kakinuma and Nakamura, 1994).

The Post-office is a major competitive threat to the Japanese banks. The Post-office gains from both scale economies, arising from its nationwide branch network, and scope economies, arising from the varied service it provides, from mail delivery to selling insurance. These scale and scope economies allow the Post-office to generate higher profits than the private banks, although since the Post-office is a public entity, the profits ultimately accrue to Japanese citizens.

3.5 The Fiscal Investment and Loan Program.

As mentioned, the main intention of the Japanese government in starting the Post-office saving system was in collecting the saving of the small saver and then channeling the saving to the modern, industrial sector, where the gap between the social and private returns was believed to be the largest. Until just recently, it was impossible for anyone to borrow from Postal saving.[8] Since the Meiji era, the funds collected from Postal saving were used to finance public investment projects. In the early 1950s, this financing of government programs was more formalized under the rubric of the Fiscal Investment and Loan Program (FILP).[9]

Early in the Meiji era (1868-1912), the government began placing Postal service deposits with the Ministry of Finance. Initially the funds were used almost exclusively to purchase government bonds.[10] In 1925, the government enacted the Finance Ministry Deposit Fund Bureau Deposits Law, which stipulated that money collected from the Post-offices should be deposited into the Ministry of Finance's Trust Fund Bureau. Actual Trust Fund operations still centered primarily on the purchase of government and municipal bonds, but as Japan moved toward the war, more emphasis was placed on providing funds to "national policy" companies and munitions firms.

U.S. Occupation authorities restricted the use of the Trust Funds to the purchase of national and local government bonds, and in fact, almost all of the funds were allocated to underwrite municipal bonds. There was, however, a greater need for funds by the private sector, which was rebuilding its factories destroyed by the war. There was also a great need for public infrastructure.

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[8]Starting in 1974, it became possible for individuals to borrow from the Post-office. These loans, called "Yu-yu" (or "Easy-easy") had stringent borrowing restrictions. Funds had to be necessary for daily living expenses, and time-deposits had to be used as collateral.

[9]This section closely follows Japan Development Bank (1993).

[10]For example, the money from Postal savings was used to purchase government war bonds to fight the 1905 Russo-Japanese war.

To address these needs, after the Occupation authorities left Japan in 1951, the Japanese government passed the Trust Fund Bureau law that created the FILP. Funds collected from Post-office saving, the Social Security payroll tax, and the Post-office insurance system were deposited into the Trust Fund Bureau of the Ministry of Finance.[11] Every year, the Japanese parliament formulates two budgets. The first budget is funded from tax collections and mostly entails current expenditures such as the salaries of government employees and transfer payments. The second budget, the FILP, is channeled to public enterprises and government-owned financial institutions that provides low cost loans to the private sector.

One such public financial institution is the Japan Development Bank (JDB). Started in 1951, the JDB provided loans to Japanese industries that were deemed to be "strategic." For example, the shipbuilding, steel, and automobile industries all received low cost financing from the JDB. Until 1979, interest rates, including the rates paid on Postal deposits, were kept artificially low. Given the large demand for funds, loans had to be rationed to the sectors that the government thought were important to Japan future. During Japan's high growth period which lasted until about 1973, the strategic sectors were usually in heavy industry, and thc JDB loans were used for plant and equipment investment.

An interesting question is why the Japanese government decided to pursue industrial policies through the FILP. Conceivably, the government could raise funds through the bond market by forcing banks to hold the bonds at low interest rates. To some extent, this

[11] Postal-saving has consistently provided about 50 percent of the loanable funds in the FILP.

happened, but the government's appetite for funds was much larger than what the private banks were willing to provide. The Japanese banks were a powerful political force, and they resisted the downward pressure on their profitability caused by having to hold government bonds that paid low interest. In contrast, because of collective action problems, Japanese small savers were poorly organized and could not successfully lobby for high rates of return.[12]

Throughout the post-war period, about 40 percent of the FILP funds went to government financial corporations that made loans consistent with government policies.[13] Tables 3(a) and 3(b) outline the FILP programs in 1953 and 1991. Note that the share of the funds going to the Japan Development Bank, which provides long-term loans to Japanese industries, has declined, while the share earmarked for the Housing Loan Corporation, which provides low-interest rate housing loans has risen. Also, in the 1950s, the volume of loans made by the Japan Development Bank were about 10 percent of all the loans made by the Japanese private banks, but by 1991, Japan Development Bank loans were only 0.4 percent of the loans made by the Japanese private sector. Thus, while loans made from the FILP, and ultimately from the Postal-saving system were important in the 1950s for Japanese industrial development, by the 1990s, the money from Postal-saving was mostly recycled to

[12]The Japanese domestic capital market was also segmented from the international market so funds could not flow abroad in search of higher returns.

[13]The composition of the other uses of FILP funds changed over time. In 1951, about 11 percent of the funds went to public non-financial corporations like the Japan National Railway and the Public Telephone and Telegraph monopoly. There was much privatization in Japan during the 1980s, and by 1990, only 4 percent of the FILP funds to public non-financial firms. The share of the funds going to the local and municipal governments greatly increased between 1951 and 1990.

housing loans and small business financing, which may raise the welfare of the Japanese people, but will not raise the country's productivity.[14]

3.6 Postal saving in the United Kingdom and in the United States.

The Postal Saving System is not unique to Japan, although as mentioned earlier, Japan today has by far the largest system in terms of total deposits, and the ratio of Postal saving to nominal GDP is the highest (Figure 2).[15] Below, we will examine the Postal Saving Systems of the United Kingdom, the oldest, and that of the United States, which was in existence between 1910 and 1966

The Postal Saving Systems of the U.K. and the U.S. provided small savers with a safe place to save. As in Japan, in both countries, the competition that the Postal saving system provides to the private banks was of concern to the policy-makers and the system was abolished in the U.S. in 1966, after it outlived its perceived usefulness. Unlike in Japan, however, in both the U.K. and the U.S., Postal saving was not used for directed lending.

[14]If there are social externalities in loans to these sectors, then there may be scope for government to make loans to these sectors. For example, households and small businesses are credit constrained by information imperfections, and as a result, housing investment and investment by small businesses may be suboptimal. We found evidence for this market failure in the fact that the mortgage market in Japan is relatively underdeveloped. Incidentally, the demand for mortgage loans could have been limited by the tax system that does not allow tax payers to deduct because mortgage interest payments from personal taxable income.

[15]Postal-saving exists in most Western European and East Asian countries.

3.6.1 United Kingdom.

Well before the advent of the public Postal Saving System, there was concern in Great Britain about the need to provide institutions where the working classes could save.[16] Unlike in Japan, this was not to raise capital for industrialization, but rather to make sure that the poor had resources to live on in old age and in times of bad luck. The first saving institutions to cater to the working class were private, and were more like charitable organizations like the Wendover Savings Bank, which started in 1803. The Wendover Bank was started by Reverend Smith to "better the condition of the weaker and defenseless people of society."

These early Savings banks took on a paternalistic character. Before accepting deposits, the Edinburgh Saving Company asked detailed questions regarding a person's age, education, and other factors. Depositors had to deposit a minimum amount, received four percent interest, and the management of the Company worked for free; the collected deposits, in turn, were used as working capital in the British Linens Company. To discourage the large saver, there was also a maximum amount that could be invested. During the earlier period, Savings banks were voluntary organizations, established by some benevolent gentleman to help the poor and to induce them to save money. The confidence entertained by the poor in the integrity and the well-meaning of the rich was the only security that the poor had.

Despite their origins as charitable institutions, the private Savings banks, however, soon fell prey to unscrupulous management. For example, a corrupt manager, Pratt, at

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[16]This section is taken from Lewins (1866).

Cuffe Street Bank in Dublin used the deposits to finance his private ventures, which often failed. Pratt also paid his rich friends 100 percent interest a year on their deposits.

Around the mid-1850s, the British government therefore began to see the need for a sweeping overhaul of the Savings banks, and proposed a public system that used the existing structure of the Post office system, which by that time, was accustomed to handling financial transactions through money orders. The Post office was also seen as low cost, since there was little need for additional salaries and office rents. The British Postal Saving System thus came into existence, and at that time was called the "greatest boon to the working classes since the Corn Laws."

At first, Postal saving was started at Post-offices with the best postmasters, but soon the system spread to all of the 3300 Post-offices. To discourage the large saver, there was also a limit on the combined deposits that any individual could hold at any of the 3300 Post-offices. To avoid direct competition with the private Savings banks, the interest rate on Postal deposits was 3 percent, compared to the 5 percent at the private banks. Still, attracted by the safety of the Postal Saving System, deposits soared, and Savings banks died within a decade.

3.6.2 The United States.

In 1910, the United States was the only major country which did not have the Post office saving system.[17] Public demand for the system was not great until the financial

[17]Material for this sub-section is from American Banker's Association (1937), O'Hara and Easley (1979).

panic of 1907, when a general loss of confidence in private banking institutions induced a vigorous demand for Postal saving banks, especially by Congressional Republicans. Advocates of Postal saving claimed that existing savings depositories did not meet existing needs, and many rural areas of the country did not have adequate banking facilities.

The opponents of Postal saving were the private banks, fearing increased competition. Advocates countered by arguing that Postal saving catered to clients unknown in banking circles, "...adults who are overawed by the splendor and opulence of the banking institutions."

The advocates won and Postal savings came into existence in 1910. Interest rates were 1.5 percentage points lower than the private banks; no one was permitted to deposit more than $100.00 in a calendar month, and no balance could be above $500.00. Funds received from Postal deposits were redeposited in private banks situated in the locality where the deposits were received. These limitations were imposed to prevent the Post office from competing with the private banks.

Deposits in the U.S. Postal Saving System reached their peak in 1937, a period of artificially low interest rates. Subsequently interest rates rose and funds flowed out from Postal savings. By the late 1950s, very little was deposited in Postal saving, and the system was finally closed in 1966.

What accounts for the relative lack of success for Postal saving in the U.S.? First, the advent of the Federal Deposit Insurance Corporation (FDIC) in 1933 meant that deposits in private banks were fully insured by the government, and were as safe as the Postal deposits. Second, interest rates on U.S. deposits were administratively fixed at a low rate.

In Japan, especially in the post-war period when the security of the private banks improved, the rate of return on Postal deposits was almost always competitive with that of the private banks.

3.7 The Role of Postal Saving System for the Economic Development in Japan

The Postal Saving System in Japan has been a public scheme of absorbing small savings to modern sectors. Therefore it is not an informal financial intermediary. On the contrary, it is a "public" intermediary. Then why do we discuss the Postal Saving System in an IRIS project that primarily deals with informal finance? We discuss it because the Postal Saving System is a public fiance that is directly aimed to substitute informal finance. Informal finance usually serves to syphon small units of funds from many savers to finance projects in the neighborhood community. The Postal Saving System collects deposits in small units but channels the fund to the more modern part of the economy.

Introduction of foreign technologies and institutions was a typical form of economic development in Japan. First of all, Japanese culture was the product of adaptation of chinese culture during a long period of time. The Meiji Japan imported many institutions from abroad. It imported navy and the Postal Saving System from Great Britain. In the incipient period of replacement of other financial instruments, the Postal Saving System was not completely without difficulty. The Postal Saving System could, however, take advantage of economies of scale due to the nation-wide Postal network, and economies of scope in that post offices engage both in postal services and savings business at the same time. Banks hired high-wage clerks in modern, stylistic buildings. Post offices were plain and officers were locals. Thus once the Postal Saving System gained momentum, the system grew rapidly, even to become the larest financial institution of the world.

The fund collected to the system was used to implement the industrial policy by financial incentives as well as to finance social overhead capital and housing investment. Money was led by the system and related governmental agencies to the key or targeted industries. As long as one gives positive assessment to the industrial policy of Japan --- there are some economists who do not appreciate the industrial policy --- one would recognize the role of the financial policy that faciliated the promotion of chosen industries (J. Zysman). There are some problems related to the Postal Saving System. First, to be a gigantic would create the tendency to be a monopoly. Bureaucratic control may provide a hotbed for corruption. Moreover, the controlled interest rate on the Postal saving deposit often works against the deregulation of financial market in Japan. Banks, which are also protected by rigid interest rates, complain rightly or wrongly that the existence of the Postal Saving System hinders market mechanism. The confrontation is called "Yucho senso (Postal saving war)." Thus the Postal Saving System thus collects what an informal financial intermediaries would collects. However, instead of financing the funds around the community of savers, the Postal Saving System channels the fund to modern sectors, or what government thought growing sectors, of the economy.

Despite these problems, we consider that the Postal Saving System in Japan succeeded in mobilizing small local savings that would have gone to informal finance otherwise. It channeled savings to industrial sectors that were considered to be important for future growth. From these observations, one could recommend developing countries at least to look at the possibility of introducing a Postal Saving System.

The lesson from the Postal Saving System in Japan to developing countries seems to be that some regulation of the financial sector and the introduction of public sector financial institutions could be Pareto improving. Presently, the policies recommended by many international organizations and that pursued by the developing economies themselves are almost exclusively towards the direction of financial liberalization. Japan represents the probably unique case of a developing ecoomy (in the pre-war period) that increased government regulation as the economy developed. At the present time, the over regulation is a source of troubles. But during the period of industrial development, the government interventions and regulations might have played a productive role.

4. Conclusion

In this paper, we have compared two interesting types of Japanese financial institutions. While the Mujin was an informal financial institution that financed small investors, the public Postal Saving System was introduced to transfer small saving informal sectors to the modern sectors of the Japanese economy.

A government policy that is sometimes recommended to developing countries is the deregulation of the financial system. It is said that deregulation will raise market real interest rates, thereby increasing saving in the financial system (McKinnon, 1973). Two countries that have recently deregulated are Indonesia and Thailand. Before deregulation, Indonesia had a financially repressed system with the economy dominated by a few large State banks (Nasution, 1994). After the banking deregulation, State banks were free to set their own interest rates on deposits and loans and entry barriers for private banks were lowered. Following the 1983 banking deregulation, interest rates on deposits at State banks almost doubled; the average interest rate on 6-month time deposits at State banks increased from 6 percent in March 1983 to 11.5 percent one month later (Harris, Schianterelli, and Siregar, 1992). In Thailand, in June 1989, the ceiling on time deposits of more than one-year maturity was lifted and the ceilings on all time deposits were lifted in March 1990.

In this paper, we showed that in sharp contrast to the policies of Indonesia, Thailand, and other present day developing countries, in pre-war Japan, the trend was towards more government interference in the financial system, not less. As Japan's modern history progressed, government regulation of private institutions such as the Mujin increased, and the government started new financial institutions such as the Post office deposit system.

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